

Perioperative Prevention of Penile Prosthesis Infection: Practice Patterns among Surgeons of SMSNA and ISSM

Darren J. Katz, MD,¹ Doron S. Stember, MD,¹ Christian J. Nelson, PhD, and John P. Mulhall, MD

Male Sexual and Reproductive Medicine Programme, Urology Service, Department of Surgery, Memorial Sloan-Kettering Cancer Center, New York, NY, USA

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ABSTRACT

Introduction. Anecdotally, there is great variation in the use of strategies to prevent postoperative penile implant infection.

Aim. To evaluate the perioperative practice patterns of surgeons who insert penile prostheses focusing on their respective infection control routines.

Method. An anonymous Web-based survey was sent to members of the Sexual Medicine Society of North America (SMSNA) and the International Society of Sexual Medicine (ISSM).

Main Outcome Measures. Thirty-nine questions were asked pertaining to the strategies used during the pre-, intra-, and postoperative phases of penile implant surgery to prevent infection.

Results. One hundred twenty-nine surgeons responded to the survey (SMSNA 84; ISSM 45). Most surgeons considered themselves sexual medicine specialists. More SMSNA respondents had inserted >100 prosthesis (SMSNA 69%, ISSM 50%). Routine urine culture is not performed by 40% and 50% of SMSNA and ISSM members, respectively. Similar percentages of surgeons from each society request a daily preoperative antimicrobial scrub. About two-thirds of ISSM members use razors for the preoperative shave compared with one-third of SMSNA members. Most ISSM surgeons preferred povidone-iodine for hand and skin preparation while most SMSNA surgeons chose this only for skin preparation. Two-thirds of SMSNA members prepared the skin for at least 10 minutes compared with 34% of ISSM surgeons. There were considerable differences in all aspects of antibiotic usage not only between members of both societies but also among individual members of each society. Most surgeons prefer not to place a drain (SMSNA 70%, ISSM 81%). Discharge timing differs between the two groups.

Conclusions. There is great variation in perioperative strategies utilized to prevent penile implant infections including some key differences between surgeons from SMSNA and ISSM. It is unknown if these variations result in changes in the postoperative infection rate; however, the study data may assist in the formation of practice guidelines and form the basis of future prospective studies. **Katz DJ, Stember DS, Nelson CJ, and Mulhall JP. Perioperative prevention of penile prosthesis infection: Practice patterns among surgeons of SMSNA and ISSM. J Sex Med 2012;9:1705–1714.**

Key Words. Inflatable Penile Prosthesis; Antibiotic Selection; Infection; Erectile Dysfunction; Survey of Urologists; Erectile Dysfunction; Practice Pattern Survey; Three-Piece Penile Implant

Introduction

Penile implants have remained integral in the treatment of erectile dysfunction (ED) refractory to medical treatment since their introduction

in 1973 [1]. They provide a prompt, rigid, and reliable erection with associated high satisfaction rates among patient and their partners [2,3]. Postoperative implant infection remains low at 1–3% [4,5]. Identified risk factors for infection include poorly controlled diabetes, spinal cord injury, immunosuppression, concurrent urinary tract infection, and ileal conduit [5–9]. Some of these

¹The first two authors are equal first coauthors of this article.

risk factors are non-modifiable and great variation exists in other strategies to prevent postoperative penile prosthesis infection.

Central to these strategies is the provision of perioperative antibiotics; however, other peripheral approaches have been proposed in an attempt to reduce infections such as preoperative bathing in an antibacterial shower, intraoperative technical modifications and limiting drain placement [10–13]. Robust data on these prevention strategies are absent and thus detailed specific recommendations are lacking. Indeed, official antibiotic guidelines for antimicrobial prophylaxis in prosthetic surgery differ between the American Urological Association and the European Association of Urology [14,15]. We therefore sought to assess in detail the perioperative strategies used by urological penile implant surgeons worldwide to prevent postoperative implant infections.

Aims

We evaluated the perioperative practice patterns of surgeons who insert inflatable penile prostheses focusing on infection control routines. We aimed to assess for trends in practice and to determine if any significant differences existed among surgeons from members of the Sexual Medicine Society of North America (SMSNA; mostly North American urologists) and the International Society of Sexual Medicine (ISSM; mostly non-North American urologists). We also sought to examine for variations in practice among surgeons within a particular society.

Methods

Instrument

A 39-question survey (Appendix 1) was sent electronically to members of the SMSNA and ISSM using the Web-based tool Survey Monkey (SurveyMonkey.com, LLC, Palo Alto, CA, USA). The survey was completed anonymously and posed questions relating to the pre-, intra-, and postoperative phases of penile implant surgery. Practitioner demographics and experience were also surveyed.

Main Outcome Measures

The survey addressed the perioperative practice patterns of SMSNA and ISSM members. Preoperative questions included the utilization of urine cultures, timing of patient shaving, shaving imple-

ment used, hand-scrubbing ingredient and duration of scrub, and surgical glove preferences. The factors relating to intraoperative practices included skin preparation, operating room characteristics, and types of drapes used. Drain utilization and usual length of patient stay were also queried. Antibiotic preferences were a major focus of the survey. We questioned surgeons on their pre-, intra-, and postoperative antibiotic usage. Questions related to both oral and intravenous antibiotics. The type of intraoperative antibiotic irrigation was also queried.

Details concerning members' background were collected and included the region of practice, experience as a resident, and fellowship training. Information on past and current experience with penile prosthesis procedures was surveyed.

Results

Surgeon Demographics

A total of 129 surgeons responded to the survey. Eighty-four respondents were from SMSNA and 45 were from ISSM. As seen in Figure 1A, B, SMSNA members were overwhelmingly North American (92%) while ISSM members were mainly from Latin America (44%), North America (13%), or Europe (13%). In both societies approximately 55% of physicians described their practices as private with the remainder in academics. A majority of ISSM members (60%) focus their practice on andrology compared with 40% of SMSNA members. This is reflected by 49% of ISSM respondents devoting more than 50% of their practice to male sexual dysfunction compared with 29% of SMSNA respondents. Overwhelmingly, the vast majority of all respondents considered themselves specialists in sexual medicine (SMSNA 90%, ISSM 100%).

Surgeon Experience

During residency training, approximately similar proportion of surgeons between SMS and ISSM "scrubbed in" for penile implant cases. Fifty percent of SMSNA respondents and 42% of ISSM respondents had participated in at least 20 cases. On the other end of the spectrum, 23% of SMSNA members participated in fewer than five cases compared with 41% of ISSM members.

ISSM members were twice as likely to be fellowship-trained in sexual medicine (ISSM 71% vs. SMSNA 35%). ISSM members were in practice for longer with 91% being in practice for at

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